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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,726	01/21/2004	Yury M. Podrazhansky	4E09.1-020	3657

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EXAMINER	
DEMILLE, DANTON D	
ART UNIT	**PAPER NUMBER**
3764	

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/761,726	PODRAZHANSKY ET AL.	
	Examiner	Art Unit	
	Danton DeMille	3764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 April 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16,19-39 and 42-55* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16,19-39,42-55* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. **Claims 1-16, 19-39, 42-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nedwell in view of Van Brunt et al.**

2. Nedwell teaches a ramp generator circuit 16 that sweeps the frequency between a lower limit and an upper limit, column 3, lines 19-25. Nedwell also provides a driver circuit 12. Nedwell teaches a typical frequency range of 40 to 160 Hz. Nedwell also teaches an additional frequency sweep from 16 Hz upwards may be employed in order to excite a Helmholtz resonance of the person's lungs, column 4, lines 10-16. The frequency sweep from 16 Hz upward comprehends the claimed frequency sweep having frequencies less than 100 Hz. The frequency sweep from 40 to 160 Hz comprehends the claimed frequency sweep having frequencies above 100 Hz.

3. It would appear that the ramp generator circuit 16 comprehends the claimed "processor". Applicant doesn't claim a microprocessor and algorithm to generate the ramp singles until a later dependent claim. Therefore it would appear applicant is intending to comprehend something other than a microprocessor and algorithm in claim 1 to process and generate a ramped signal.

4. However, to any extent the ramp generator circuit doesn't comprehend a "processor" to generate signals and process the signal into ramped signals, it would have been obvious to automate something that is done manually. It would have been obvious to provide a "processor" to generate the ramped signal so that the signal can be easily modified or changed by simply programming a different pattern. Furthermore, it is well settled that it is not "invention" to

broadly provide a mechanical or automatic means to accomplished the same result. *In re Venner*, 120 USPQ 192.

5. Additionally, Van Brunt teaches an air pulse generator transducer 16 that uses a "processor" that is programmable to provide any number or range of frequencies. The processor provides a high frequency sweep, a normal frequency sweep and a low frequency sweep. Clearly providing a "processor" that is programmed with any number of different sweeps or any number of frequency ranges is well known to the artisan of ordinary skill as taught by Van Brunt.

6. It would have been obvious to one of ordinary skill in the art to modify Nedwell to automate and provide a processor to generate the different frequency ranges as taught by Van Brunt in order to be able to change and modify the parameters by simply programming the processor to do it.

7. The dependent claims merely recite different combinations of different frequencies and amplitudes. There is no unobviousness for one of ordinary skill in the art to adjust and find frequencies that are optimum for a particular patient or intended use. There appears to be no unobviousness to any one of these combinations. Applicant's dependent claims recite a myriad of different combinations of single and multiple frequency sweeps. The overall teaching of using different frequency sweeps is well known as exemplified by the prior art. Finding a particular combination of frequencies or amplitudes is one of the things that one skilled in the art would play around with to find the optimum results for a particular patient's and a particular condition.

8. The many different combination of frequency sweeps appear to present no novel or unexpected result over the prior art. Use of such frequency sweeps in lieu of those used in the

references solves no stated problem and would be an obvious matter of design choice within the skill of the art. In re Launder, 42 CCPA 886, 222 F.2d 371, 105 USPQ 446 (1955); Flour City Architectural Metals v. Alpana Aluminum Products, Inc., 454 F. 2d 98, 172 USPQ 341 (8th Cir. 1972); National Connector Corp. v. Malco Manufacturing Co., 392 F.2d 766. 157 USPQ 401 (8th Cir.) cert. denied, 393 U.S. 923, 159 USPQ 799 (1968).

9. Under some circumstances, however, changes such as these may impart patentability to a process if the particular ranges claimed produce a new and unexpected result which is different in kind and not merely in degree from the results of the prior art. In re Dreyfus, 22 CCPA (Patents) 830, 73 F.2d 931, 24 USPQ 52; In re Waite et al., 35 CCPA (Patents) 1117, 168 F.2d 104, 77 USPQ 586. Such ranges are termed "critical" ranges, and the applicant has the burden of proving such criticality. In re Swenson et al., 30 CCPA (Patents) 809, 132 F.2d 1020, 56 USPQ 372; In re Scherl, 33 CCPA (Patents) 1193, 156 F.2d 72, 70 USPQ 204. However, even though applicant's modification results in great improvement and utility over the prior art, it may still not be patentable if the modification was within the capabilities of one skilled in the art. In re Sola, 22 CCPA (Patents) 1313, 77 F.2d 627, 25 USPQ 433; In re Normann et al., 32 CCPA (Patents) 1248, 150 F.2d 627, 66 USPQ 308; In re Irmscher, 32 CCPA (Patents) 1259, 150 F.2d 705, 66 USPQ 314. More particularly, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Swain et al., 33 CCPA (Patents) 1250, 156 F.2d 239, 70 USPQ 412; Minnesota Mining and Mfg. Co. v. Coe, 69 App. D.C. 217, 99 F.2d 986, 38 USPQ 213; Allen et al. v. Coe, 77 App. D.C. 324, 135 F.2d 11, 57 USPQ 136.

Response to Arguments

10. Applicant's arguments filed 12 April 2006 have been fully considered but they are not persuasive.

11. Applicant has interpreted the teaching of Nedwell column 4, lines 10-16 as either a single fixed frequency of about 16 Hz along with a single sweep band of 40 Hz to 160 Hz or a single sweep band from 16 Hz to 160 Hz. It is not clear how applicant can interpret Nedwell this way. The full paragraph of the Nedwell language is provided below.

> In the embodiments described above, a frequency range of 40 to 160 Hz has been mentioned in order to excite a pulmonary resonance. Alternatively or additionally a frequency of about 16 Hz, or a range from about 16 Hz upwards may be employed in order to excite a Helmholtz resonance of the person's lungs.

12. Clearly Nedwell teaches that previously to this paragraph Nedwell has disclosed using a frequency sweep of 40 to 160 Hz. In addition to that Nedwell teaches in order to excite a Helmholtz resonance of the person's lungs one can use a fixed frequency of about 16 Hz or a sweep from 16 Hz upwards. The purpose of the 16 Hz frequency is to excite a Helmholtz resonance. This Helmholtz resonance is a treatment that is provided to the patient as an alternative or as an addition.

13. It is not clear how applicant can take the 16 Hz frequency and add the 40 to 160 Hz sweep to it without doing the same with the 16 Hz and upwards. Instead applicant has come up with their own modification of a single sweep of 16 to 160 Hz. This new sweep of 16 to 160 Hz is not taught by Nedwell. Using applicant's logic in the first instance of adding the 40 to 160 Hz sweep to the fixed 16 Hz, applicant would also have to add the 40 to 160 Hz sweep to the sweep from 16 Hz upward. That is what Nedwell intended after reciting the previous embodiment of

using 40 to 160 Hz, one can alternatively or additionally use the 16 Hz treatment. The additional treatment of using the sweep from 16 Hz upward would comprehend applicant's claimed lower frequency sweep being less than 100 Hz and Nedwell's treatment of using 40-160 Hz comprehends applicants claimed higher frequency sweep having frequencies above 100 Hz.

14. Regarding Van Brunt, it is not clear how much weight can be given the arguments that Van Brunt fails to teach the claimed low frequency sweep and high frequency sweep since the primary reference to Nedwell already teaches this. Van Brunt merely teaches that it is well known to an artisan of ordinary skill in the art that it may be necessary to provide a computer to program different high, normal and low frequency sweep vibrations to the chest of a patient.

15. The only thing that Nedwell possibly lacks is the provision of a processor. It is maintained that Nedwell teaches a ramp generator circuit 16 that sweeps the frequency between a lower limit and an upper limit that comprehends the claimed "processor to provide an output signal". Since dependent claims further limit the processor to one containing an algorithm, then the circuit provided by Nedwell would comprehend "a processor to provide an output signal" having the frequency sweeps claimed.

16. Regarding the dependent claims, Nedwell teaches that practitioner in the art can add additional frequency sweeps dependent on desired results. There is no unobviousness to provide additional frequency sweeps as desired or required dependent on what works best for a patient. Finding the optimum frequency or combination of frequencies is well within the realm of the artisan of ordinary skill. Such details are obvious through routine experimentation. There is no unexpected results from any particular frequency or amplitude claimed.

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

18. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Danton DeMille whose telephone number is (571) 272-4974. The examiner can normally be reached on M-Th from 8:30 to 6:00. The examiner can also be reached on alternate Fridays.

20. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Huson, can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

21. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

15 May 2006

Danton DeMille
Primary Examiner
Art Unit 3764